AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A self-enhancing search system for automatically providing expanded keyword searches comprising:

a semantic taxonomy <u>stored on least one computing device, the semantic taxonomy</u> containing semantic node terms in a hierarchical structure, each semantic node term identifying groups of related keywords;

a search system text analyzer <u>stored on the least one computing device, wherein the search system text analyzer</u> ~~that~~ periodically looks through a set of documents for a database and identifies keyword terms used in each of the documents that occur in the hierarchical structure;

a semantic binder <u>stored on the least one computing device, the semantic binder</u> for attaching a textual index to each of the documents in the set of the documents, the textual index for each of the documents including at least one semantic node term that identifies keyword terms used in the document; and

a relevant document finder <u>stored on the least one computing device,</u> which automatically, without user intervention,

enhances a users keyword query entry with the semantic node term that identifies the keyword query term in the users keyword query to create an enhanced keyword query, the enhanced keyword query including both the keyword query term and the semantic node term, and,

based on the enhanced keyword query, locates documents in the set of

documents that contain a match for the keyword query term and documents in the set of documents that do not contain a match for the keyword query term in the users keyword query but contain other keyword search terms that are linked to the keyword query term by the semantic node term identifying the keyword query term to thereby increase the number of documents returned to the user.

2. (Cancelled).

3. (Previously Presented) The search system of claim 1 including a semantic dictionary which defines user keyword query terms in user queries in accordance with the semantic terms used to identify nodes in the hierarchical structure.

4. (Previously Presented) The search system of claim 3 including a semantic dictionary builder which systematically examines the system log off line for new keyword queries to increase the keyword terms in the hierarchical structure and associate them with one or more semantic node terms used to identify the nodes of that structure.

5. (Previously Presented) The search system of claim 4 including ranking the results of searches using the enhanced queries to place terms in the semantic dictionary in order of most often used keyword query terms to reduce table lookup time.

6. (Previously Presented) The search system of claim 5, wherein the semantic dictionary builder includes:

a sub-module that identifies domain specific terms in a given keyword query, using domain specific glossary;

a sub-module that finds synonyms and related terms for the identified keyword query terms, using a domain specific thesaurus;

a sub-module that finds that statistically close terms to the identified keyword query terms; and

a sub-module that identifies relevant domain specific categories for the identified keyword terms, using domain specific ontology.

7. (Previously Presented) The search system of claim 6, wherein the dictionary builder includes:

a sub-module that binds keywords in the identified categories of the hierarchical structures, using the results of the text analyzer.

8. (Previously Presented) The search system of claim 7, wherein the semantic binder includes:

a sub-module that adds new doc-query links to the meta-data of the corresponding textual index entries to link the documents to the semantic node terms in the hierarchical structure.

9. (Previously Presented) A computer program comprising program code embodied in at least one computer-readable storage medium, which when executed, enables a computer system to implement a method of automatically providing expended keyword

searches to increase the scope of keyword searches, the method comprising:

creating a semantic taxonomy containing semantic node terms in a hierarchical structure, each semantic node term identifying groups of related keywords;

periodically looking through a set of documents for a database to identify any keyword terms used in each of the documents that occur in the hierarchical structure;

attaching a textual index for to each of the documents, the textual index for each of the documents including at least one semantic node term that identifies a keyword term used in the document; and

automatically, without user intervention, enhancing a users keyword query to create an enhanced keyword query by adding the semantic node term that identifies a keyword query term in the users keyword query to the keyword query term, the enhanced keyword query including both the keyword query term and the semantic node term; and,

based on the enhanced keyword query, locating documents in the set of documents that contain a match for the keyword query term in the users keyword query and documents in the set of documents which do not contain a match for the keyword query term in the users keyword query but contain other keyword search terms that are linked to the keyword query term by the semantic node term identifying the keyword query term to thereby increase the number of documents returned to the user.

10. (Cancelled).

11. (Previously Presented) The computer program of claim 9, the method further

comprising defining user keyword query terms in user keyword queries in accordance with the semantic nodes in a semantic dictionary.

12. (Previously Presented) The computer program of claim 9, the method further comprising systematically off line examining new user keyword queries in a system log to increase the keyword terms in the semantic dictionary and associates them with one or more semantic node term.

13. (Previously Presented) The computer program of claim 12, the method further comprising ranking the results of searches using the enhanced queries to place keyword query terms in order of most used keyword terms to reduce table lookup time.

14. (Previously Presented) The computer system program of claim 13,

identifying domain specific keyword terms in a given query, using domain specific glossary;

finding synonyms and related terms for the identified keyword terms, using domain specific thesaurus;

finding other statistically close keyword terms; and

identifying relevant domain specific categories for that identified keyword terms, using domain specific ontology.

15. (Previously Presented) The computer program of claim 14, the method further comprising binding keyword queries in the identified semantic taxonomy categories,

using the original results of the semantic binder.

16. (Previously Presented) The computer program of claim 15, the method further comprising adding new doc-query links to the meta-data of the textual index entries to link the documents to the semantic taxonomy categories.

17. (Currently Amended) A method for a computer search system to interrogate a database that automatically provides expanded keyword search queries comprising:

    providing a semantic taxonomy <u>on at least one computing device, the semantic taxonomy</u> containing semantic node terms in a hierarchical structure, each semantic node term identifying groups of related keywords;

    providing a search system text analyzer <u>on the at least one computing device, wherein the search system text analyzer</u> ~~that~~ periodically looks through a set of documents for a database and identifies keyword terms used in each of the documents that occur in the hierarchical structure;

    using a semantic binder <u>stored on the at least one computing device</u> for attaching a textual index to each of the documents in the set of documents, the textual index for each of the documents including at least one semantic node term that identifies keyword terms used in the document; and

    <u>providing</u> a relevant document finder <u>on the at least one computing device,</u> which automatically, without user intervention,

        enhances a users keyword query entry with the semantic node term that identifies the users keyword query in the users keyword query to automatically

create an enhanced keyword query, the enhanced keyword query including both

the keyword query term and the semantic node term, and,

based on the enhanced keyword query, locates documents of the set of

documents that contain a match for the keyword query term and documents of

the set of documents that do not contain a match for the keyword query term in

the users keyword query but contain other different keyword search terms that

are linked to the keyword query term by the semantic node term identifying the

keyword query term to thereby increase the number of documents returned to the

user.

18. (Cancelled).

19. (Currently Amended) The method of claim 17, the method further including using a

semantic dictionary stored on the at least one computing device which defines user

keyword query terms in user queries in accordance with the nodes in the hierarchical

structure.

20. (Currently Amended) The search method of claim 19, the method further including

using a semantic dictionary builder stored on the at least one computing device which

systematically examines a system log off line for new keyword queries to increase the

keyword terms in the semantic dictionary and associate them with one or more nodes in

the hierarchical structure.